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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/894,479	06/29/2001	Richard Henry Dee	00-113-TAP	5932

7590 11/21/2003

Wayne P. Bailey,
Storage Technology Corporation
One Storage Tek Drive
Louisville, CO 80028-4309

EXAMINER

CASTRO, ANGEL A

ART UNIT	PAPER NUMBER
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2653

DATE MAILED: 11/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/894,479

Applicant(s)

DEE, RICHARD HENRY

Examiner

Angel A Castro

Art Unit

2653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 2,3,10-16,18,19 and 26-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-9,17 and 20-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 2-3, 10-16, 18-19, 26-32 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species. It is noted that figure 8, corresponding to Species 1 and described in page 16 of the specification, refers to an embodiment in which permanent magnet stabilizing elements are used to increase the stiffness of the free layer of the spin valve sensor. Therefore, claims 8 and 24, not included in the elected claims, are included. Claims 2-3, 10-11, 15, 18-19, 26-27 and 31, not reading in the elected Species are withdrawn from consideration. Applicant timely traversed the restriction (election) requirement in Paper No. 5.
2. Applicant's election with traverse of Species 1 in Paper No. 5 is acknowledged. The traversal is on the ground(s) that the Examiner has required restriction of the claims without an assertion that there is a serious burden on the Examiner if restriction is not required, and without stating why the different embodiments are distinct inventions.

This is not found persuasive because each of the various disclosed species details a mutually exclusive characteristic of a spin valve sensor as evidenced by the representation of each various species with a different figure or set of figures. A search for one of these mutually exclusive characteristics is not coextensive with a search for the other mutually exclusive characteristics and therefore searching for all mutually exclusive characteristics could not be done without serious burden.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 5-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear from the claim what has to do with the invention (a magnetic tape reader) increasing the stiffness of a free layer of a magnetic disk head spin valve sensor.

Drawings

5. Figure 10A should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 4-9, 17, 20-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Tobise et al (U.S. Pat. 5,748,416).

Regarding claims 1 and 17, Tobise et al discloses an apparatus for reading data (figure 15), comprising:

a magnetic tape media contact surface configured to contact a magnetic tape media; and
a reduced sensitivity spin valve sensor 20', wherein the reduced sensitivity spin valve sensor senses an applied magnetic field from the magnetic tape media when the magnetic tape media passes by the reduced sensitivity spin valve sensor, and wherein the reduced sensitivity spin valve sensor has a sensitivity less than magnetic disk head spin valve sensors (column 5, lines 11-19).

Regarding claims 4 and 20, Tobise discloses that the sensitivity is reduced from a sensitivity of the magnetic disk head spin valve sensor by increasing an effective anisotropy field of a free layer in a magnetic disk head spin valve sensor (column 5, lines 11-15).

Regarding claims 5 and 21, Tobise et al discloses that the effective anisotropy field of the magnetic disk head spin valve sensor is increased by increasing a stiffness of a free layer of the magnetic disk head spin valve sensor (see column 5, lines 15-19).

Regarding claims 6 and 22, Tobise et al discloses that the stiffness of the free layer is increased by using at least one permanent magnet stabilizing element 21 to impart a stiffening magnetic field to the free layer.

Regarding claims 7 and 23, Tobise et al discloses that the at least one permanent magnet stabilizing element is a cobalt-platinum-chromium magnet (column 5, line 26).

Regarding claims 8 and 24, Tobise et al discloses that the stiffness of the free layer is increased by using an antiferromagnet 14 to impart a stiffening magnetic field to the free layer.

Regarding claims 9 and 25, Tobise et al discloses that the stiffness of the free layer is increased by using both an antiferromagnet 14 and at least one permanent magnet stabilizing element 21 to impart a stiffening exchange magnetic field to the free layer (see figure 15).

Conclusion

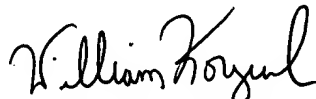
8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Xiao et al (U.S. Pat. 6,291,087) discloses a magnetoresistive sensor; Miyauchi et al (U.S. Pat. 5,852,533) discloses a magnetoresistive effect transducer element.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angel A Castro whose telephone number is 703-308-8435. The examiner can normally be reached on Monday through Thursday, 8 AM to 6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R Korzuch can be reached on 703-305-6137. The fax phone number for the organization where this application or proceeding is assigned is 703-746-6037.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

Angel Castro, Ph.D.


WILLIAM KORZUCH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600